PS Claim 10; Col 151; 127pp; English.
XX
CC The present invention describes isolated DNA (I) encoding at least one
CC osteogenically active region of human osteogenic protein-1 in prepro form
CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described
CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers
CC that can induce cartilage and endochondral bone formation in a mammal
CC when implanted in a matrix; (B) vectors containing (I) or related DNA;
CC (C) host cells transformed with this vector; (D) DNA (I') encoding a
CC prepro- or pro-OP1, and related vectors and transformed cells; (E)
CC osteogenic protein (II) produced by expression of transformed mammalian
CC cells, able to induce bone and cartilage formation; (F) mature OP1
CC secreted from mammalian cells following expression of the sequence that
CC encodes hOP1-PP; and (G) production of an active osteogenic composition
CC by truncating mature OP1 protein. Host cells of (C) are used to produce
CC proteins able to induce cartilage and bone formation, e.g. for correction
CC of acquired or congenital craniofacial defects or other skeletal or
CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.
CC in osteoarthritis, or generally wherever bone formation is required. The
CC proteins induce complete development of endochondral bone, including
CC vascularisation, mineralisation and bone marrow differentiation. The
CC present sequence represents a human OP1 fragment. (Updated on 20-MAR-2003
CC to correct PA field.)
XX
SQ Sequence 97 AA;

Query Match 100.0%; Score 111; DB 2; Length 97;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETVPKPCCAPTQLNAIS 20
||||||||||||||||||||
Db 52 INPETVPKPCCAPTQLNAIS 71

RESULT 4
AAW95444
ID AAW95444 standard; protein; 97 AA.
XX
AC AAW95444;
XX
DT 26-MAR-1999 (first entry)
XX
DE Conserved 6 cysteine skeleton fragment from human OP1.
XX
KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;
KW bone morphogenic protein; BMP; growth factor-beta superfamily;
KW polycystic kidney disease; multicystic dysplastic kidney disease;
KW uraemic medullary cystic disease; human.
XX
OS Homo sapiens.
XX
PN WO9850061-A1.
XX
PD 12-NOV-1998.
XX
PF 06-MAY-1998; 98WO-US009268.
XX
PR 07-MAY-1997; 97US-0045909P.
XX
PA (BIOJ) BIOGEN INC.
XX
PI Gjorstrup P, Harris R;
XX
DR WPI; 1999-070084/06.
XX
PT Treating cystic kidney disease - using renal therapeutic agents or
PT sequences encoding them, especially from the osteogenic protein/bone
PT morphogenic protein family.
XX
PS Claim 3; Page 5-6; 67pp; English.
XX
CC The invention relates to methods for treating cystic kidney diseases. The
CC method comprises administering an effective amount of a renal therapeutic
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a
CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family
CC within a transforming growth factor-beta superfamily of proteins. It is
CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OPS, OP7,
CC OP1-16Ser, OP1-16Leu, OP1-16Met, OP1-16Ala, OP1-16Val, mOP1, mOP1-PP,
CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their
CC biologically active homologues. The method is used to treat humans
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,
CC uraemic medullary cystic disease, and autosomal dominant polycystic
CC kidney disease. The present sequence represents a human osteogenic
CC protein 1 (OP1) species defining the the conserved 6 cysteine skeleton in
CC the active region
XX
SQ Sequence 97 AA;

Query Match 100.0%; Score 111; DB 2; Length 97;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETVPKPCCAPTQLNAIS 20
||||||||||||||||||||
Db 52 INPETVPKPCCAPTQLNAIS 71

RESULT 5
AAP95681
ID AAP95681 standard; protein; 98 AA.
XX
AC AAP95681;
XX
DT 25-MAR-2003 (revised)
DT 21-AUG-1990 (first entry)
XX
DE Human osteogenic protein 1(OP1-I) for osteogenic device.
XX
KW Osteogenic device; osteogenic protein; endochronal bone;
KW biodegradable matrix.
XX
OS Synthetic.
XX
PN WO8909788-A.
XX
PD 19-OCT-1989.
XX
PF 08-APR-1988; 88US-00179406.
XX
PR 08-APR-1988; 88US-00179406.
PR 15-AUG-1988; 88US-00232630.
PR 23-FEB-1989; 89US-00315342.
PR 07-APR-1989; 89WO-US001469.
XX
PA (CREA-) CREATIVE BIOMOLECULES INC.
XX
PI Oppermann H, Kuberasamp T, Rueger D;
XX
DR WPI; 1989-324203/44.
XX
PT Osteogenic devices comprising matrix contg. osteogenic proteins - prepd.
PT by recombinant techniques.
XX
PS Claim 9; Page 48; 69pp; English.
XX
CC The protein is capable of inducing endochronal bone formation in
CC association with a biocompatible, in vivo biodegradable matrix. The
CC protein is produced by expression of the recombinant DNA in a host cell
CC and comprises more than one polypeptide chain, with an amino acid
CC sequence sufficiently duplicative of COP5, COP7, COP16 or OP1. The
CC protein and the implantable devices enable optimal predictable bone
CC formation. Clinical applications include correction of acquired and
CC congenital craniofacial and other skeletal or dental anomalies, induction

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CC   of local endochondral bone formation in non-union fractures, peridontal
CC   applcns. requiring bone formation and cartilage repair, eg in the
CC   treatment of osteoarthritis. See also AAP95679-P95692 and AAN95097.
CC   (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to
CC   correct PA field.)
XX
SQ   Sequence 98 AA;

  Query Match             100.0%;  Score 111;  DB 1;  Length 98;
  Best Local Similarity   100.0%;  Pred. No. 4.4e-07;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 INPETVPKPCCAPTQLNAIS 20
              ||||||||||||||||||||
Db         53 INPETVPKPCCAPTQLNAIS 72


RESULT 6
AAP95682
ID   AAP95682 standard; protein; 102 AA.
XX
AC   AAP95682;
XX
DT   25-MAR-2003  (revised)
DT   21-AUG-1990  (first entry)
XX
DE   Human osteogenic protein 1(OP1-II) for osteogenic device.
XX
KW   Osteogenic device; osteogenic protein; endochronal bone;
KW   biodegradable matrix.
XX
OS   Synthetic.
XX
PN   WO8909788-A.
XX
PD   19-OCT-1989.
XX
PF   08-APR-1988;   88US-00179406.
XX
PR   08-APR-1988;   88US-00179406.
PR   15-AUG-1988;   88US-00232630.
PR   23-FEB-1989;   89US-00315342.
PR   07-APR-1989;   89WO-US001469.
XX
PA   (CREA-) CREATIVE BIOMOLECULES INC.
XX
PI   Oppermann H,  Kuberasamp T,  Rueger D;
XX
DR   WPI; 1989-324203/44.
XX
PT   Osteogenic devices comprising matrix contg. osteogenic proteins - prepd.
PT   by recombinant techniques.
XX
PS   Claim 10; Page 49; 69pp; English.
XX
CC   The protein is capable of inducing endochronal bone formation in
CC   association with a biocompatible, in vivo biodegradable matrix. The
CC   protein is produced by expression of the recombinant DNA in a host cell
CC   and comprises more than one polypeptide chain, with an amino acid
CC   sequence sufficiently duplicative of COP5, COP7, COP16 or OP1. The
CC   protein and the implantable devices enable optimal predictable bone
CC   formation. Clinical applications include correction of acquired and
CC   congenital craniofacial and other skeletal or dental anomalies, induction
CC   of local endochondral bone formation in non-union fractures, peridontal
CC   applcns. requiring bone formation and cartilage repair, eg in the
CC   treatment of osteoarthritis. See also AAP95679-P95692 and AAN95097.
CC   (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to
CC   correct PA field.)
XX
SQ   Sequence 102 AA;

  Query Match             100.0%;  Score 111;  DB 1;  Length 102;
  Best Local Similarity   100.0%;  Pred. No. 4.5e-07;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 INPETVPKPCCAPTQLNAIS 20
              ||||||||||||||||||||
Db         57 INPETVPKPCCAPTQLNAIS 76


RESULT 7
AAR53360
ID   AAR53360 standard; protein; 102 AA.
XX
AC   AAR53360;
XX
DT   25-MAR-2003  (revised)
DT   01-JUL-2002  (revised)
DT   06-JUN-1994  (first entry)
XX
DE   Osteogenic protein OP7.
XX
KW   Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;
KW   vascularisation; mineralisation; differentiation.
XX
OS   Homo sapiens.
XX
PN   US5266683-A.
XX
PD   30-NOV-1993.
XX
PF   21-FEB-1992;   92US-00841646.
XX
PR   08-APR-1988;   88US-00179406.
PR   15-AUG-1988;   88US-00232630.
PR   23-FEB-1989;   89US-00315342.
PR   17-OCT-1989;   89US-00422613.
PR   17-OCT-1989;   89US-00422699.
PR   22-FEB-1990;   90US-00483913.
PR   20-AUG-1990;   90US-00569920.
PR   07-SEP-1990;   90US-00579865.
PR   18-OCT-1990;   90US-00599543.
PR   18-OCT-1990;   90US-00600024.
PR   21-NOV-1990;   90US-00616374.
PR   04-DEC-1990;   90US-00621849.
PR   04-DEC-1990;   90US-00621988.
PR   22-FEB-1991;   91US-00660162.
PR   20-DEC-1991;   91US-00810560.
PR   28-JAN-1992;   92US-00827052.
XX
PA   (STYC ) STRYKER CORP.
XX
PI   Kuberasampath T,  Ozkaynak E,  Rueger DC,  Pang RHL,  Oppermann H;
XX
DR   WPI; 1993-395405/49.
DR   N-PSDB; AAQ53141.
XX
PT   New pure mammalian osteogenic proteins - induce cartilage and
PT   endochondral bone formation when in association with a matrix.
XX
PS   Claim 7; Col 69-72; 128pp; English.
XX
CC   This sequence is a fragment of the osteogenic protein OP1 and is
CC   designated OP7. The sequence is a 102 C-terminal region and functional
CC   domain of OP1. The osteogenic protein when in association with a matrix
CC   can induce at the locus of an implant the full development cascade of
CC   endochondral bone formation including vascularisation, mineralisation and
CC   bone marrow differentiation. The osteogenic protein can also be used to
CC   repair both bone and cartilage in the treatment of osteoarthritis.
CC   (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003
CC   to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)
XX
SQ   Sequence 102 AA;

  Query Match             100.0%;  Score 111;  DB 2;  Length 102;
  Best Local Similarity   100.0%;  Pred. No. 4.5e-07;
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          1 INPETVPKPCCAPTQLNAIS 20
            ||||||||||||||||||||
        386 INPETVPKPCCAPTQLNAIS 405


RESULT 154
US-09-019-339B-2
; Sequence 2, Application US/09019339B
; Patent No. 6281195
;  GENERAL INFORMATION:
;    APPLICANT:  RUEGER, David C
;    APPLICANT:  TUCKER, Marjorie M
;    TITLE OF INVENTION:  MATRIX-FREE OSTEOGENIC DEVICES, IMPLANTS AND
;    TITLE OF INVENTION:  METHODS OF USE THEREOF
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  James F. Haley, Jr., Esq. c/o FISH & NEAVE
;      STREET:  1251 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  United States of America
;      ZIP:  10020
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/019,339B
;      FILING DATE:  February 5, 1998
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  James F. Haley, Jr., Esq.
;      REGISTRATION NUMBER:  27,794
;      REFERENCE/DOCKET NUMBER:  CRP-147
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212)596-9000
;      TELEFAX:  (212)596-9090
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  431 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-019-339B-2

  Query Match           100.0%;  Score 111;  DB 3;  Length 431;
  Best Local Similarity  100.0%;  Pred. No. 2.3e-07;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 INPETVPKPCCAPTQLNAIS 20
              ||||||||||||||||||||
Db        386 INPETVPKPCCAPTQLNAIS 405


RESULT 155
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